

## The Effect of Sustainability Reporting Disclosure on Profitability with Good Corporate Governance as a Moderating Variable

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**Abstract:** This research aims to examine the effect of Sustainability Reporting Disclosure (SRD) on corporate profitability, with Good Corporate Governance (GCG) as a moderating variable. The research focuses on mining companies listed on the Indonesia Stock Exchange (IDX). Profitability is measured using Return on Assets (ROA), while SRD is assessed through a sustainability disclosure index based on the Global Reporting Initiative (GRI) guidelines. GCG is proxied by corporate governance mechanisms, including the proportion of independent commissioners and the existence of an audit committee. This research applies a quantitative approach using panel data regression and Moderated Regression Analysis (MRA). Secondary data were collected from companies' annual reports and financial statements during the observation period. The results indicate that Sustainability Reporting Disclosure has a positive effect on corporate profitability. Furthermore, Good Corporate Governance also positively influences profitability. The moderating analysis reveals that GCG strengthens the relationship between SRD and ROA. These findings suggest that sustainability disclosure supported by strong corporate governance enhances stakeholder trust, improves transparency, and encourages more efficient asset utilization, ultimately leading to better financial performance. This study contributes to the sustainability and corporate governance literature by providing empirical evidence from the Indonesian mining sector.

**Keywords:** sustainability reporting disclosure; good corporate governance; profitability; return on assets

### INTRODUCTION

In Indonesia, the mining and energy sectors make a significant contribution to the national economy in terms of state revenue, labor absorption, and infrastructure development. However, this sector also poses various environmental problems such as pollution, deforestation, and carbon emissions. To respond to these conditions, the Indonesian government issued POJK No. 51/POJK.03/2017 on the implementation of sustainable finance, which requires financial service institutions, issuers, and public companies to prepare sustainability reports. In addition, the government has also set a national target of Net Zero Emission 2060 as part of its global commitment to reducing greenhouse gas emissions (Financial Services Authority, 2017).

The mining and energy industries have contributed greatly to the Indonesian economy, both through production activities and state revenues. In terms of production output, the oil and gas sector remains dominated by several large companies, with the main contribution coming from multinational enterprises and state-owned entities. Moreover, the minerals and coal sectors also make important contributions through substantial royalty payments and the involvement of major mining companies. In aggregate, the contribution of the mining and energy sectors to state revenues underscores their strategic role in supporting national finances. However, the magnitude of this economic contribution is accompanied by high environmental and governance risks inherent in extractive industries. The high dependence on this sector calls

for sustainable management and the implementation of Good Corporate Governance (GCG) so that long-term economic benefits can be achieved without neglecting environmental and social aspects (Databoks, 2022).

Environmental cases involving companies in the mining sector have become a critical phenomenon closely associated with corporate profitability in Indonesia. A prominent example is PT Timah Tbk (TINS), one of the largest mining companies in the country, which was implicated in cases of environmental damage caused by illegal tin mining activities occurring within the company's mining business license (IUP) area. Based on environmental loss calculations conducted by law enforcement and environmental experts, these illegal activities caused widespread damage across forest and non-forest areas, with total environmental losses estimated at hundreds of trillions of rupiah. These losses included ecological degradation, loss of environmental economic value, and restoration and rehabilitation costs (Organisation for Economic Co-operation and Development, 2021).

The scale of these environmental impacts suggests that a company's failure to control illegal mining activities can lead to severe environmental and legal risks, which ultimately exert downward pressure on profitability. The relationship between environmental risk, legal exposure, and corporate financial performance has been widely discussed in sustainability and corporate governance literature (Clark, 2015). This condition is reflected in PT Timah Tbk's financial performance, as its financial statements revealed a significant decline in revenue and a shift from profit to loss in subsequent periods, as reported by the Indonesia Stock Exchange (IDX) and mass media (Murtaib, 2025).

Legal findings related to environmental damage in mining companies demonstrate that firms in this sector face potential financial burdens from compensation obligations, legal sanctions, and environmental restoration costs. These obligations can suppress cash flow, reduce profitability, and increase financial instability risks, as discussed in several studies on environmental risk and corporate financial performance (M. Sari & Lestari, 2023). This phenomenon reflects systemic risks faced by mining companies generally. For instance, PT Timah Tbk experienced revenue declines and net losses in certain periods, indicating the diversion of financial resources to meet legal and environmental obligations. This situation reduces a firm's ability to optimize asset utilization for profit generation, reflected in a declining Return on Assets (ROA) ratio, as evidenced by studies linking environmental obligations with asset-use efficiency (Wijayanti & Pratama, 2022).

In this study, corporate profitability is measured using Return on Assets (ROA) as the primary indicator. ROA assesses a company's effectiveness in generating profit from its total asset base (Brigham & Ehrhardt, 2019). By applying ROA, researchers can determine a company's capacity to utilize available resources efficiently to produce income (Horne & Wachowicz, 2020). When firms face environmental and legal burdens, such as those encountered by PT Timah Tbk, their ability to generate returns declines due to increased unproductive costs, including environmental restoration, legal settlements, and compensation expenses (Nugroho & Safitri, 2022).

Another phenomenon affecting the financial performance of mining companies in Indonesia is the fluctuation of global commodity prices. Sri Mulyani Indrawati (2025) highlighted that nickel prices have decreased on a monthly, yearly, and year-to-date basis. Such price declines may reduce the revenues of mining companies, as sale prices are a primary

determinant of profit margins. In the mining sector, downward trends in commodity prices can lead to lower net profits, ultimately weakening profitability levels, including the ROA indicator. This shows that, in addition to environmental and legal factors, mining companies also face market risks that can affect asset management efficiency and profit generation capacity.

An important factor influencing corporate profitability is Sustainability Reporting Disclosure (SRD). Many companies tend to focus on financial reporting while neglecting non-financial information such as SRD, even though these disclosures play a strategic role in reflecting social, environmental, and governance accountability (Firiana, 2024). According to Nur & Fadia (2023), SRD encompasses economic, social, and environmental issues derived from a company’s operational activities.

Sustainability Reporting Disclosure (SRD) serves as a critical tool for increasing corporate accountability and transparency regarding the economic, social, and environmental impacts of business operations. Sustainability disclosure reflects a company’s commitment to sustainable development principles and functions as a strategic communication medium with stakeholders. In this context, SRD provides information about a company’s sustainability performance across economic, environmental, and social dimensions, thereby strengthening stakeholder trust and enhancing corporate reputation (Gina et al., 2022; Yuyun et al., 2022). Increased stakeholder trust, in turn, positively influences corporate financial performance and profitability

Consistent with this, several empirical studies have shown a significant relationship between sustainability disclosure and corporate financial performance. Ramadhan et al. (2023) found that companies in the energy and mining sectors that consistently disclose SRD tend to report higher Return on Assets (ROA) compared to those that do not. This finding is reinforced by Yudi et al. (2022), who noted that higher levels of SRD have a positive effect on ROA, as broader disclosure enhances a company’s ability to optimize its assets for profit generation. In addition, Yuyun et al. (2022) demonstrated that SRD affects firm performance from both economic and social perspectives, while Gina et al. (2022) confirmed that sustainability disclosures encompassing economic, environmental, and social dimensions significantly influence corporate profitability.

**Table 1.** Contribution of Mining and Energy Industry to Indonesian Economy

<b>Contribution Aspect</b>	<b>Commodities/Sectors</b>	<b>National Total</b>	<b>Major Companies &amp; Contributions</b>
Lifting Production	Petroleum	287 million barrels	Chevron (40%), Pertamina EP (15%), Pertamina Hulu Energi (5%), ConocoPhillips (5%), INPEX (5%) Others (30%)
Lifting Production	Natural Gas	2.3 million MMSCF	ConocoPhillips (21%), BP (16%), Pertamina EP (12%), INPEX (11%), Total (10%) Others (30%)
Mining Royalties	Minerals & Coal	IDR 18.4 trillion	Kaltim Prima Coal (14%), Freeport Indonesia (11%), Adaro Energy (11%), Kideco (8%) Bukit Asam (8%), Others (54%)

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<b>Contribution Aspect</b>	<b>Commodities/Sectors</b>	<b>National Total</b>	<b>Major Companies &amp; Contributions</b>
State Revenue	Oil and Gas	IDR 341 trillion	Contribution of the oil and gas sector nationally
State Revenue	Minerals and Coal	IDR 37 trillion	Contribution of the mineral and mineral sector nationally

Although various studies show that Sustainability Reporting Disclosure (SRD) has a positive effect on a company's profitability, the effectiveness of sustainability disclosure is inseparable from the quality of the underlying corporate governance. In this context, Good Corporate Governance (GCG) plays an important role in ensuring that sustainability disclosures are not merely symbolic but truly reflect the company's commitment to responsible resource management and long-term value creation. According to Suwandi (2022), Good Corporate Governance (GCG) is a corporate governance system designed to ensure that operational activities are conducted in a transparent, accountable, and responsible manner for all stakeholders. GCG includes the principles of ownership, board responsibility, transparency, accountability, and the protection of stakeholder rights. Meanwhile, Nurchasana et al. (2025) emphasized that implementing good GCG can minimize conflicts of interest between management and shareholders while ensuring the efficient and responsible use of company resources.

In addition, Arifin & Prasetyo (2022) stated that GCG is an important mechanism for increasing investor and stakeholder trust, as a sound governance structure promotes transparent decision-making and minimizes the risk of managerial error. Effective GCG implementation not only supports corporate stability but also provides a foundation for stronger environmental and social risk management.

In the context of this study, Good Corporate Governance (GCG) acts as a moderating variable that regulates the influence of Sustainability Reporting Disclosure (SRD) on profitability, as measured using Return on Assets (ROA). The application of GCG in this study is represented through several corporate governance indicators commonly used in empirical research, including the proportion of independent commissioners, the existence and effectiveness of audit committees, and institutional ownership as a management monitoring mechanism. Research by Ramadhan et al. (2023) shows that companies with good GCG implementation are able to manage environmental risks more effectively, thereby strengthening the influence of SRD on ROA. Yusnia (2024) added that governance structures, such as independent boards of commissioners and effective audit committees, reinforce the impact of sustainability practices on financial performance. Nugroho & Safitri (2022) emphasized that transparency and accountability within GCG help companies maintain profitability stability even when facing external pressures.

Although various previous studies have examined the effect of Sustainability Reporting Disclosure (SRD) on company profitability, existing findings still show limitations and opportunities for further development. Most prior research has focused on the direct effect of SRD on financial performance without considering how corporate governance factors might strengthen or weaken this relationship. Furthermore, empirical studies that specifically

integrate Good Corporate Governance (GCG) as a moderating variable in the relationship between SRD and profitability—particularly within mining and energy sector companies in Indonesia—remain relatively limited. In fact, these sectors exhibit higher environmental, legal, and market risks than others, making the effectiveness of sustainability disclosure highly dependent on the quality of corporate governance.

The novelty of this study lies in its effort to integrate Sustainability Reporting Disclosure (SRD) and Good Corporate Governance (GCG) into a single analytical framework to explain the profitability performance of companies in Indonesia's mining and energy sectors. Unlike previous studies that have generally positioned GCG as an independent variable or examined only the direct influence of SRD on profitability, this study specifically positions GCG as a moderating variable that explains how the quality of corporate governance affects the effectiveness of sustainability disclosure in enhancing Return on Assets (ROA). In addition, the focus on mining and energy companies—industries characterized by high environmental, legal, and market risks—provides a more relevant empirical context for examining sustainability issues in Indonesia. Therefore, this study is expected to make a new empirical contribution to the sustainability and corporate governance literature, particularly in understanding the strategic role of GCG in strengthening the relationship between sustainability practices and corporate financial performance.

In this study, Good Corporate Governance (GCG) is positioned as a moderating variable that strengthens the influence of Sustainability Reporting Disclosure (SRD) on profitability (ROA). Strong GCG implementation, through effective oversight mechanisms such as independent boards of commissioners and audit committees, enhances the credibility and quality of corporate sustainability disclosures. Thus, SRDs supported by solid corporate governance are not merely symbolic but become more effective in creating economic value and improving a company's ability to manage assets for profit generation. Accordingly, this study aims to empirically analyze "The Effect of Sustainability Reporting Disclosure on Profitability with Good Corporate Governance as a Moderation Variable." By understanding the interrelationship between these variables, the findings of this study are expected to provide deeper insights for academics, business practitioners, and investors in evaluating sustainability strategies and corporate governance practices that affect financial performance.

## **MATERIALS AND METHODS**

The objects of this study are the variables of Sustainability Reporting Disclosure (SRD), Good Corporate Governance (GCG), and Profitability as measured by Return on Assets (ROA), which were chosen because they are considered capable of explaining the relationship between sustainability practices, corporate governance, and company financial performance. The study uses a verification method with a quantitative approach to test the empirically established hypotheses (Sugiyono, 2019; Sekaran & Bougie, 2019). The data used are secondary data obtained from annual reports, sustainability reports, and financial reports of coal mining companies listed on the Indonesia Stock Exchange for the period 2020–2024. The study population consisted of 18 companies, and through a purposive sampling technique based on the completeness of financial reports, the availability of sustainability reports, and GCG information, 8 companies were obtained as the final sample of the study. The data collection technique was carried out using the documentation method by downloading and recording

official data from the IDX and company websites (Sugiyono, 2019).

The operationalization of variables was carried out by measuring SRD using the GRI-G4 standard-based disclosure index (Global Reporting Initiative, 2013), GCG using the ratio of the number of independent commissioners to the total board of commissioners (OECD, 2015), and Profitability using ROA (Harahap, 2021). Data analysis was carried out using EViews 13 software with descriptive analysis stages to observe data characteristics (Santoso, 2020), followed by classical assumption tests including normality, heteroscedasticity, and multicollinearity tests to ensure the validity of the regression model (Ghozali, 2018; Gujarati & Porter, 2020). Furthermore, hypothesis testing was carried out through the coefficient of determination ( $R^2$ ) test, partial t-test, and Moderated Regression Analysis (MRA) to assess the role of GCG as a moderating variable in the relationship between SRD and Profitability, so that the resulting model meets the Ordinary Least Squares (OLS) rules and is able to explain the influence between variables comprehensively.

## **RESULTS AND DISCUSSION**

### **Descriptive Statistics**

This research was conducted on companies in the mining sector, particularly the coal subsector, listed on the Indonesia Stock Exchange (IDX). The selection of the coal mining sector as the research object is based on the characteristics of the industry, which involve high levels of natural resource exploitation and pose potential environmental and social impacts. Therefore, companies in this sector are required to implement sustainability practices more transparently through the disclosure of Sustainability Reporting Disclosure (SRD) and the application of Good Corporate Governance (GCG).

PT Adaro Energy Tbk (ADRO) is one of the main players in the national coal industry, operating an integrated business from upstream to downstream. In addition to focusing on coal production and sales, the company has also begun developing a more sustainable energy business. The large scale of operations requires ADRO to pay close attention to sustainability issues, as reflected in its disclosure of social and environmental aspects in corporate reports as a form of accountability to stakeholders.

Furthermore, PT Bumi Resources Tbk (BUMI) is recognized as a coal company with a large production capacity and broad market reach, both domestically and internationally. The company's past financial challenges have made corporate governance a crucial aspect of its management. In this study's context, BUMI illustrates how sustainability disclosure and the implementation of Good Corporate Governance (GCG) are applied amid fluctuations in corporate financial performance.

Next, PT Bayan Resources Tbk (BYAN) is a coal company known for its relatively high operational efficiency. The company's consistently strong financial performance reflects its management's ability to control costs and manage production effectively. At the same time, BYAN also conveys information on occupational safety, environmental management, and social responsibility as part of its efforts to ensure operational sustainability.

Furthermore, PT Indo Tambangraya Megah Tbk (ITMG) operates coal mining activities with a strong export orientation. The company has been relatively consistent in applying corporate governance principles and maintaining transparency with stakeholders. ITMG's sustainability disclosure functions as a medium to demonstrate its commitment to responsible

business practices while maintaining sustainable Profitability.

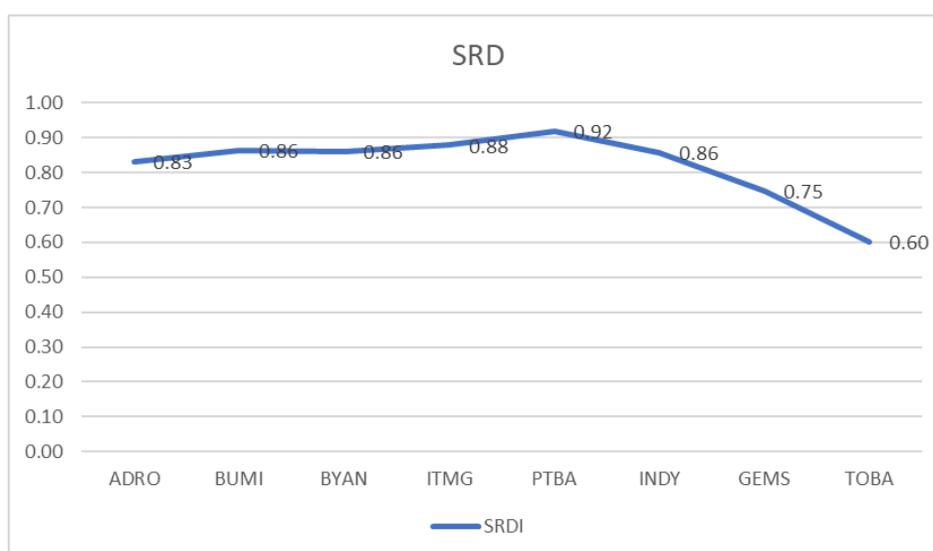
Next, PT Bukit Asam Tbk (PTBA) is a state-owned coal mining company that plays a strategic role in supporting national energy security. As a state-owned enterprise, PTBA faces stronger public demands for accountability and transparency. Therefore, the company actively communicates its sustainability performance and governance implementation as part of efforts to balance commercial objectives and social responsibility.

Furthermore, PT Indika Energy Tbk (INDY) has different characteristics compared to other coal companies because it operates an integrated energy business. In recent years, INDY has shifted its business strategy toward the more sustainable energy sector. This change makes Sustainability Reporting Disclosure increasingly important, especially in communicating the company's commitment to the energy transition and strengthening corporate governance.

Next, PT Golden Energy Mines Tbk (GEMS) is a coal company that has recorded significant performance growth in line with increasing energy demand. The expansion of operational activities encourages the company to enhance transparency, particularly in environmental management and social responsibility. Thus, GEMS is relevant in examining the relationship between sustainability disclosure and corporate Profitability.

Finally, PT TBS Energi Utama Tbk (TOBA) is undergoing a business transformation from coal to a more sustainability-oriented energy sector. This transformation demonstrates the company's awareness of the changing direction of the energy industry. In this process, implementing Good Corporate Governance (GCG) and Sustainability Reporting Disclosure (SRD) plays a crucial role in building stakeholder trust and supporting long-term financial performance.

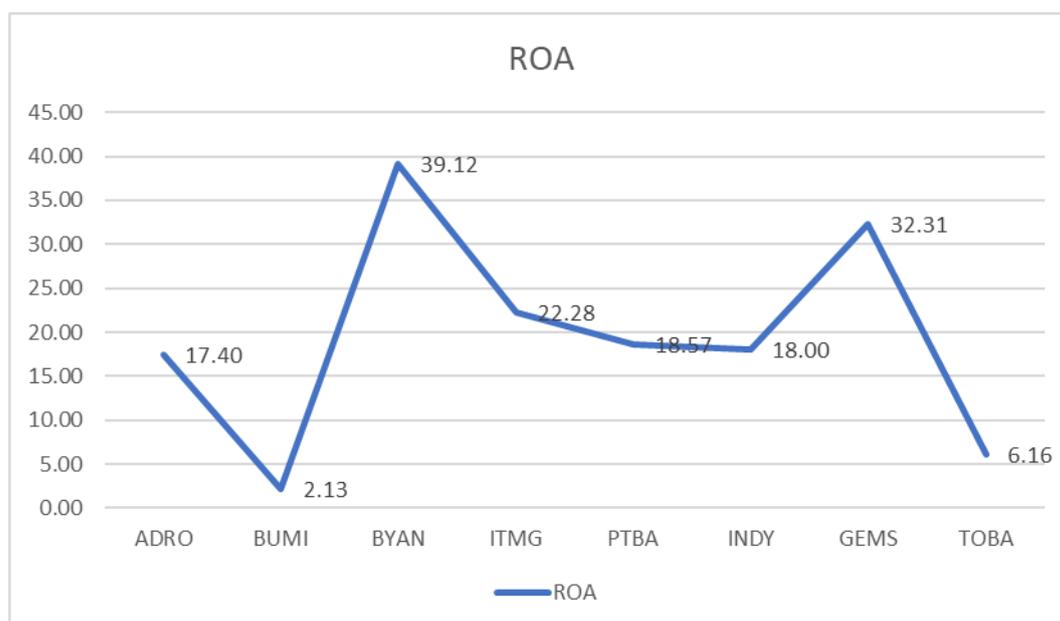
To provide an initial overview of the levels of Sustainability Reporting Disclosure (SRD), Profitability, and Good Corporate Governance (GCG) in coal subsector companies, this study presents data on corporate sustainability disclosure during the 2020–2024 period. The data are summarized in tabular form to facilitate systematic presentation and improved understanding of the information.



**Figure 1.** Sustainability Reporting Disclosure Chart of Coal Subsector Companies for the Period 2020 to 2024

Source: Secondary data processed (2025)

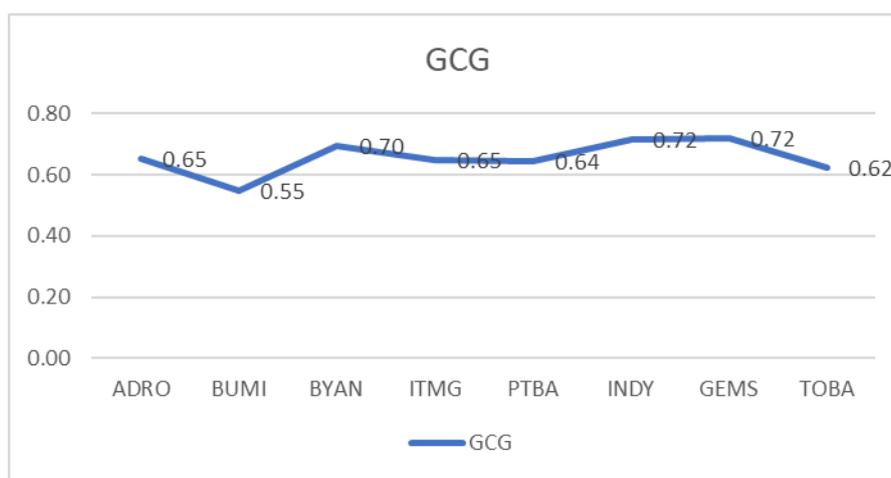
Based on Figure 1, the graph of the level of Sustainability Reporting Disclosure in coal subsector companies for the 2020–2024 period shows variations between companies assessed based on the SRDI index with a value range of 0–1, where the value of 0.81–1.00 is categorized as very good, 0.61–0.80 is categorized as good, 0.41–0.60 is categorized as adequate, and  $\leq 0.40$  is categorized as poor. Based on these criteria, PT Bukit Asam Tbk. (PTBA) with an SRD value of 0.92 is included in the very good criteria, which shows a very comprehensive disclosure of sustainability reporting. PT Indo Tambangraya Megah Tbk. (ITMG) with a score of 0.88 and PT Bumi Resources Tbk. (BUMI), PT Bayan Resources Tbk. (BYAN), and PT Indika Energy Tbk. (INDY) which each recorded a value of around 0.86 were in the very good criteria, reflecting the consistency and completeness of sustainability disclosures. PT Adaro Energy Tbk. (ADRO) with an SRD of 0.83 is also included in the very good criteria, although it is relatively lower than other companies in the category. Meanwhile, PT Golden Energy Mines Tbk. (GEMS) with a value of 0.75 is in good criteria, while PT Toba Bara Sejahtera Tbk. (TOBA) with a value of 0.60 is included in the sufficient criteria, which indicates that sustainability reporting still needs to be improved to be more in line with applicable sustainability disclosure standards. These category differences illustrate the variation in the level of commitment and transparency of sustainability practices between coal subsector companies during the observation period.



**Figure 2.** Profitability Graph of Coal Subsector Companies for the Period 2020 to 2024  
Source: Secondary data processed (2025)

Based on Figure 2, the graph of profitability levels measured using Return on Assets (ROA) in coal subsector companies for the 2020–2024 period shows significant differences between companies. The ROA assessment in this study is classified with the ROA criteria  $> 30\%$  as excellent,  $20\%–30\%$  as good,  $10\%–20\%$  as adequate, and  $<10\%$  as poor, which reflects the level of effectiveness of the company in generating profits from the total assets owned. Based on these criteria, PT Bayan Resources Tbk. with a ROA of 39.12 is in the very good

criteria, showing very optimal asset management capabilities. PT Golden Energy Mines Tbk. with a ROA of 32.31 is also included in the very good criteria, while PT Indo Tambangraya Megah Tbk. with a ROA of 22.28 is in the good criteria. Furthermore, PT Bukit Asam Tbk., PT Indika Energy Tbk., and PT Adaro Energy Tbk., which recorded ROA of 18.57, 18.00, and 17.40, respectively, are included in the sufficient criteria, which shows relatively stable profitability but still has the potential to be increased. Meanwhile, PT Toba Bara Sejahtera Tbk. and PT Bumi Resources Tbk. with ROA of 6.16 and 2.13 respectively were in the poor criteria, which indicates the low effectiveness of asset utilization in generating profits. The variation in the value of ROA reflects the difference in financial performance and asset management efficiency between coal sub-sector companies during the observation period.



**Figure 3.** Graph of Good Corporate Governance of Coal Subsector Companies for the Period 2020 to 2024

Source: Secondary data processed (2025)

Based on figure 3, the graph of the level of Good Corporate Governance (GCG) in coal subsector companies for the 2020–2024 period shows variations between companies assessed using the GCG index with a value range of 0–1, where the value of 0.71–1.00 is categorized as very good, 0.61–0.70 is categorized as good, 0.41–0.60 is categorized as adequate, and  $\leq 0.40$  is categorized as poor. Based on these criteria, PT Indika Energy Tbk. and PT Golden Energy Mines Tbk., which each recorded a GCG value of 0.72, are included in the very good criteria, reflecting the implementation of strong and effective corporate governance. PT Bayan Resources Tbk. with a GCG value of 0.70 is in the good criteria, followed by PT Adaro Energy Tbk. and PT Indo Tambangraya Megah Tbk. which each recorded a value of 0.65 and is also included in the good criteria. PT Bukit Asam Tbk. with a GCG value of 0.64 is categorized as good, while PT Toba Bara Sejahtera Tbk. with a value of 0.62 is in the criteria of good to adequate. Meanwhile, PT Bumi Resources Tbk. with a GCG value of 0.55 is included in the sufficient criteria, which indicates that the implementation of corporate governance still needs to be strengthened in terms of supervision and management structure. This variation in GCG values illustrates the difference in the quality of the corporate governance mechanism of the coal subsector during the observation period.

Descriptive statistics are used to provide an overview or description of data based on a number of measures, such as mean value, standard deviation, variance, maximum, minimum,

sum, range, curtosis, and skewness (Ghozali, 2018). The mean is the most commonly used measure to determine the central value of a data distribution, while the standard deviation indicates the degree to which the data deviates from its average value. The descriptive statistics in this study are presented in the following table:

**Table 4.** Descriptive Statistical Test

	Y	X	Z
<i>Mean</i>	19.49625	0.819250	0.656000
<i>Median</i>	16.67500	0.860000	0.650000
<i>Maximum</i>	61.76000	0.970000	0.790000
<i>Minimum</i>	-9.840000	0.500000	0.400000
<i>Std. Dev.</i>	16.63645	0.118005	0.070194
<i>Skewness</i>	0.832290	-1.092093	-1.063124
<i>Kurtosis</i>	3.125700	3.279300	6.777881
<i>Jarque-Bera Probability</i>	4.644373	8.081130	31.32219
	0.098059	0.017588	0.000000
<i>Sum</i>	779.8500	32.77000	26.24000
<i>Sum Sq. Dev.</i>	10794.08	0.543078	0.192160
<i>Observations</i>	40	40	40

Source : Eviews Data Processing 13, 2025

Based on table 1 above, which is the working table of the results of the Descriptive Statistical Test, several conclusions can be obtained, namely:

**Variable Dependent Profitability (Y)**

The profitability variable (Y) has an average value of 19.50, which indicates that in general the sample company was able to generate profits during the observation period. The minimum value of -9.84 and the maximum of 61.76 indicate a difference in financial performance between companies. The standard deviation of 16.64 indicates a relatively high variation in profitability.

**Independent variable Sustainability Reporting Disclosure (X)**

The sustainability reporting disclosure (X) variable has an average value of 0.82, which indicates that the company's sustainability disclosure rate is relatively high. The maximum value of 0.97 and the minimum of 0.50 indicate that there is still a difference in the level of disclosure between companies, although the variation is relatively small with a standard deviation of 0.12.

**Good Corporate Governance Moderation Variable (Z)**

The variable of good corporate governance (Z) has an average value of 0.66, which reflects that the implementation of corporate governance in the sample companies is at a fairly good level. The standard deviation value of 0.07 shows that GCG practices were relatively stable between companies during the study period.

Panel data is a combination of time series data and cross-section data (Basuki, 2016). To

find out the most efficient method of the three equation models, namely the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM), it is necessary to test each of these models using the regression estimation method.

**Table 2.** Panel Data Regression Results Using the Common Effect Model (CEM) Approach

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	-114.6099	19.62935	-5.838700	0.0000
X	33.30175	15.29084	2.177888	0.0359
Z	162.8410	25.70578	6.334800	0.0000
<i>R-squared</i>	0.573262	<i>Mean dependent var</i>	19.49625	
<i>Adjusted R-squared</i>	0.550195	<i>S.D. dependent var</i>	16.63645	
<i>S.E. of regression</i>	11.15765	<i>Akaike info criterion</i>	7.734167	
<i>Sum squared resid</i>	4606.249	<i>Schwarz criterion</i>	7.860833	
<i>Log likelihood</i>	-151.6833	<i>Hannan-Quinn criter.</i>	7.779965	
<i>F-statistic</i>	24.85209	<i>Durbin-Watson stat</i>	1.013128	
<i>Prob(F-statistic)</i>	0.000000			

Source : Eviews Data Processing 13, 2025

Based on Table 2, the results of panel data regression using the Common Effect Model (CEM) approach show that sustainability reporting disclosure and good corporate governance have an effect on the profitability of companies in the mining and coal sector. The sustainability reporting disclosure (X) variable has a coefficient of 33.30 with a probability value of 0.0359, which indicates a positive and significant influence on profitability. The variable of good corporate governance (Z) also showed an influence with a coefficient of 162.84 and a probability value of 0.0000. Simultaneously, the regression model was significantly declared with a Prob(F-statistic) value of 0.0000, while the Adjusted R-squared value of 0.55 showed that 55.02% of the variation in profitability could be explained by both independent variables in the model, while the rest was influenced by other factors outside the study.

**Table 3.** Panel Data Regression Results Using the Fixed Effect Model (FEM) Approach

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	-112.2814	25.21737	-4.452540	0.0001
X	46.83590	24.66107	1.899184	0.0672
Z	142.3892	37.31044	3.816336	0.0006
<i>Effects Specification</i>				
<i>Cross-section fixed (dummy variables)</i>				
<i>R-squared</i>	0.730971	<i>Mean dependent var</i>	19.49625	
<i>Adjusted R-squared</i>	0.650262	<i>S.D. dependent var</i>	16.63645	
<i>S.E. of regression</i>	9.838573	<i>Akaike info criterion</i>	7.622816	
<i>Sum squared resid</i>	2903.926	<i>Schwarz criterion</i>	8.045036	
<i>Log likelihood</i>	-142.4563	<i>Hannan-Quinn criter.</i>	7.775478	
<i>F-statistic</i>	9.056884	<i>Durbin-Watson stat</i>	1.573984	
<i>Prob(F-statistic)</i>	0.000002			

Source : Eviews Data Processing 13, 2025

Based on Table 3, the results of the regression of panel data using the Fixed Effect Model (FEM) approach show that the variable of good corporate governance (Z) affects profitability with a coefficient of 142.39 and a probability value of 0.0006, while sustainability reporting disclosure (X) has a coefficient of 46.84 but is not significant at a significance level of 5% with a probability value of 0.0672. The overall FEM model is significant, as indicated by the Prob(F-statistic) value of 0.000002, and has a fairly strong explanatory ability with an Adjusted R-squared value of 0.65, which means that about 65.03% of the variation in profitability can be explained by variables in the model, while the rest is influenced by other factors outside the study.

**Table 4.** Panel Data Regression Results Using the Random Effect Model (FEM) Approach

<i>Variable</i>	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-Statistic</i>	<i>Prob.</i>
C	-113.2601	21.98407	-5.151916	0.0000
X	38.43608	18.85418	2.038598	0.0487
Z	154.3713	30.14323	5.121260	0.0000
<i>Effects Specification</i>				
			<i>S.D.</i>	<i>Rho</i>
<i>Cross-section random</i>			6.810988	0.3240
<i>Idiosyncratic random</i>			9.838573	0.6760
<i>Weighted Statistics</i>				
<i>R-squared</i>	0.518638	<i>Mean dependent var</i>	10.57921	
<i>Adjusted R-squared</i>	0.492618	<i>S.D. dependent var</i>	13.50347	
<i>S.E. of regression</i>	9.618616	<i>Sum squared resid</i>	3423.158	
<i>F-statistic</i>	19.93261	<i>Durbin-Watson stat</i>	1.349213	
<i>Prob(F-statistic)</i>	0.000001			

Source : Eviews Data Processing 13, 2025

Based on Table 4, the results of the regression of panel data using the Random Effect Model (REM) approach show that sustainability reporting disclosure (X) and good corporate governance (Z) affect the profitability of companies in the mining and coal sectors. The sustainability reporting disclosure variable has a coefficient of 38.44 with a probability value of 0.0487, which indicates an influence at a significance level of 5%. Meanwhile, the variable of good corporate governance showed a stronger influence with a coefficient of 154.37 and a probability value of 0.0000. Simultaneously, the regression model was declared significant with a Prob(F-statistic) value of 0.000001, while the Adjusted R-squared value of 0.49 showed that about 49.26% of the variation in profitability could be explained by both variables in the model, while the rest was influenced by other factors outside the study.

Based on the three data regression estimation models above, the most appropriate model will be selected to estimate the desired regression equation model with the chow test, hausman test, and lagrange multiplier test (Anggraini et al., 2020) as follows:

The chow test is a test used to select the best approach between the Common Effect Model (CEM) approach model and the Fixed Effect Model (FEM) in estimating panel data. The basis for decision-making is as follows:

If the probability value for cross section  $F >$  a significant value of 0.05 then  $H_0$  is accepted, so the most appropriate model to use is the Common Effect Model (CEM)

If the probability value for cross section  $F <$  a significant value of 0.05 then  $H_0$  is rejected, so the most appropriate model to use is the Fixed Effect Model (FEM)

**Table 5.** Chow Test Results

<i>Redundant Fixed Effects Tests</i>			
<i>Equation: Untitled</i>			
<i>Test cross-section fixed effects</i>			
<i>Effects Test</i>	<i>Statistic</i>	<i>d.f.</i>	<i>Prob.</i>
<i>Cross-section F</i>	2.512348	(7,30)	0.0370
<i>Cross-section Chi-square</i>	18.454013	7	0.0101

Source : Eviews Data Processing 13, 2025

The results of the chow test showed that the cross section probability value of F was  $0.0370 < 0.05$ , meaning that  $H_0$  was rejected. Thus, the most appropriate model in estimating regression equations is (FEM).

Thirst test is a test used to select the best approach between the Random Effect Model (REM) approach model and the Fixed Effect Model (FEM) in estimating panel data. The basis for decision-making is as follows:

If the probability value for cross section is random  $>$  a significant value of 0.05 then  $H_0$  is accepted, so the most appropriate model to use is the Random Effect Model (REM)

If the probability value for cross section is random  $<$  a significant value of 0.05 then  $H_0$  is rejected, so the most appropriate model to use is the Fixed Effect Model (FEM)

**Table 6.** Hausman Test Results

<i>Correlated Random Effects - Hausman Test</i>			
<i>Equation: Untitled</i>			
<i>Test cross-section random effects</i>			
<i>Test Summary</i>	<i>Chi-Sq. Statistic</i>	<i>Chi-Sq. d.f.</i>	<i>Prob.</i>
<i>Cross-section random</i>	0.364104	2	0.8336

Source : Eviews Data Processing 13, 2025

The results of the thirst test showed that the random cross section probability value was  $0.8336 > 0.05$ , meaning that  $H_0$  was accepted. Thus, the most appropriate model in estimating regression equations is the Random Effect Model (REM).

The LM (Lagrange Multiplier Test) test is a test used to determine whether the Random Effect Model (REM) model is more appropriately used compared to the Pooled Ordinary Least Square (Pooled OLS) model in panel data analysis.

If the probability value of the LM test > a significant value of 0.05, then H0 is accepted, so the most appropriate model to use is Pooled OLS (CEM)

## **CONCLUSIONS**

Based on the results of the analysis and discussion regarding the influence of Sustainability Reporting Disclosure (SRD) on Profitability, with Good Corporate Governance (GCG) as a moderating variable in mining and coal sector companies listed on the Indonesia Stock Exchange (IDX), several conclusions can be drawn as follows. Sustainability Reporting Disclosure (SRD) affects company Profitability. The results show that the higher the level of sustainability disclosure by a company, the higher its profitability. These findings indicate that corporate transparency in disclosing economic, environmental, and social aspects increases stakeholder confidence and supports the financial performance of companies in the mining and coal sectors.

Good Corporate Governance (GCG) affects company Profitability. The implementation of sound corporate governance has been proven to enhance profitability performance. Effective supervision and control mechanisms through GCG encourage more efficient, accountable, and value-oriented management, thereby producing a positive impact on financial performance.

Good Corporate Governance (GCG) moderates the influence of Sustainability Reporting Disclosure (SRD) on Profitability. The moderation test results show that GCG strengthens the relationship between SRD and Profitability. This confirms that sustainability disclosures provide more optimal economic benefits when supported by effective GCG implementation, ensuring that sustainability practices are not merely formal but genuinely contribute to improved corporate financial performance.

Based on these findings, it is recommended that: (1) Mining companies should enhance the quality and comprehensiveness of sustainability reporting to improve financial performance, (2) Management should strengthen corporate governance mechanisms, particularly the role of independent commissioners and audit committee activities, (3) Regulators should develop clearer guidelines for sustainability reporting standards in the mining sector, and (4) Future research should explore other governance mechanisms and extend the study to other industrial sectors.

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